

We claim:-

1. A syntactic polyurethane obtainable by reacting
 - a) a polyisocyanate component with
 - 5 b) a polyol component, the polyol component b) comprising the constituents
 - b1) a polyetherpolyol mixture having an average OH number of from 10 to 280 and
 - b2) an oil based on fatty acids of 6 to 25 carbon atoms or derivatives thereof,
- 10 in the presence of
 - c) hollow microspheres.
2. A syntactic polyurethane according to claim 1, wherein the polyol component b) additionally comprises the constituent
- 15 b3) chain extender.
3. A syntactic polyurethane according to claim 1 or 2, wherein the component b2) is castor oil.
- 20 4. A syntactic polyurethane according to any of claims 1 to 3, wherein the individual constituents of the polyol component b) are selected so that the polyol component b) has a viscosity at 25°C of from 200 to 1 500 mPa.s, measured according to DIN 53019.
- 25 5. A syntactic polyurethane according to any of claims 1 to 4, wherein the component
 - b1) is present in an amount of from 5 to 60% by weight and the component
 - b2) is present in an amount of from 20 to 85% by weight,
 - 30 based on the total weight of the polyol component b).
6. A process for the preparation of syntactic polyurethanes by reacting
 - a) a polyisocyanate component with
 - b) a polyol component, the polyol component b) comprising the constituents
 - 35 b1) a polyetherpolyol mixture having an average OH number of from 10 to 280 and
 - b2) an oil based on fatty acids of 6 to 25 carbon atoms or derivatives thereof, in the presence of
 - c) hollow microspheres.
- 40 7. The use of a syntactic polyurethane according to any of claims 1 to 5 for insulating offshore pipes or for the production of sockets for offshore pipes.

8. An offshore pipe composed of
(i) an inner pipe and, adhesively applied thereto,
(ii) a layer of a syntactic polyurethane according to any of claims 1 to 5.
- 5 9. An offshore pipe according to claim 8, wherein the layer (ii) of syntactic polyurethane has a thickness of from 5 to 200 mm.
10. A process for the production of offshore pipes according to claim 8 or 9, comprising the steps
- 10 1) provision of an inner pipe which is to be coated with syntactic polyurethane,
2) rotation of the pipe to be coated and
3) application of an unreacted reaction mixture for the production of the layer of syntactic polyurethane, comprising the components a), b) and c), to the
15 rotating pipe.